REMARKS

Claims 116 and 121-137 were pending and stand rejected. Claims 116, 121-123, 128, and 133 are amended herein. Claims 124, 129, and 134 are cancelled herein. Claims 116, 121-123, 125-128, 130-133, and 135-137 are pending upon entry of this amendment.

Claims 116 and 121-137 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Grinstein in view of van de Panne. Applicant respectfully traverses in view of the amended claims.

On November 10, 2009, Examiner and Applicant had a telephonic interview during which they discussed claim 116, Grinstein, and van de Panne. No agreement was reached.

As amended, claim 116 recites:

In a computer-implemented animation system, a method for animating an object, the method comprising:

receiving an input specifying a Random Motion behavior, the Random Motion behavior indicating how to change a value of a position parameter of the object over time based on a partially-random motion path and a speed at which the object moves along the motion path, wherein the speed is specified by a drag parameter, and wherein a length of the motion path is specified by an amount parameter, and wherein a shape of the motion path is determined by a random seed, a noisiness parameter that determines a level of jaggedness along the motion path, and a frequency parameter that determines a crookedness of the motion path, wherein a higher value of the frequency parameter results in the motion path having more turns, and wherein a lower value of the frequency parameter results in the motion path being straighter;

animating the object by changing the value of the position parameter of the object over time according to the Random Motion behavior; and

outputting the animated object.

As described in the pending application (¶¶689-700[1]; FIGS. 53-56), the Random Motion behavior affects an object's Position parameter (¶690). If a user applies the Random Motion behavior to an object, the behavior animates the position of the object and makes the object move around the Canvas along a partially-random path (¶690). FIG. 53 illustrates an object and a Random Motion motion path (¶690).

Note that the Random Motion behavior is not completely random. In one embodiment, the motion created with this behavior is actually affected by a particular group of parameters (¶691). As long as the parameters (and random seed number) don't change, the motion path created by the behavior will remain the same (¶691). In order to randomly generate a different motion path, a Generate button can be clicked to pick a new random seed number. The new random seed number is then used to generate a new motion path, in conjunction with the group of parameters (¶691).

Claim 116 states that the Random Motion behavior can be configured using various parameters. Specifically, the shape of the motion path is determined by a random seed, a noisiness parameter, and a frequency parameter. The frequency parameter determines a crookedness of the motion path. Applying the Random Motion behavior to an object causes the object to move along a particular motion path. This motion path is largely random (e.g., based on the seed number), but its crookedness can be configured by specifying a value for the frequency parameter. A higher value of the frequency parameter results in the motion path having more turns, and a lower value of the frequency parameter results in the motion path being straighter.

Claim 116 recites, in part, "receiving an input specifying a Random Motion behavior, the Random Motion behavior indicating how to change a value of a position parameter of the object over time based on a partially-random motion path … wherein a shape of the motion path is determined by a random seed … and a frequency parameter that determines a crookedness of the motion path, wherein a higher value of the frequency parameter results in the motion path having more turns, and wherein a lower value of the frequency parameter results in the motion path being straighter" (emphasis added).

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[1] Paragraph citations are to the application as published.

Applicant agrees with Examiner that Grinstein does not disclose, teach, or suggest the claimed element "frequency parameter" (Detailed Action, page 5). It follows that Grinstein does not disclose, teach, or suggest the claimed element "wherein a shape of the motion path is determined by a random seed … and a frequency parameter that determines a crookedness of the motion path."

Van de Panne does not remedy this deficiency. Van de Panne discusses control techniques for physically-based animation (title). Specifically, a parameterized controller for periodic turning motions (such as in alpine skiing and bicycling) is presented (page 83, line 3; page 84, lines 5-6). The control scheme places three variables under the animator's control: ω_0 (turn frequency), θ_{max} (turn sharpness), and θ_h (general heading of the turns) (§5.5, lines 2-6).

Examiner argues that van de Panne's ω_0 variable (turn frequency) corresponds to the claimed element "frequency parameter" and suggests combining Grinstein with van de Panne.

Claim 116 states that the shape of the motion path is determined by both a random seed and a frequency parameter. Grinstein discusses a motion path whose shape is determined solely by a random seed. Specifically, the randomDir command uses the simulation time (returned by simTime()) as a seed number to determine a direction at random (Section 6.2.8.5 entitled Boundary Bounce; 38:37-40). Van de Panne discusses a motion path whose shape is determined solely by a frequency parameter (ω_0).

In other words, Examiner is suggesting combining a completely random motion path (Grinstein) with a completely deterministic motion path (van de Panne). Applicant requests that Examiner explain how this combination would work.

Applicant also notes that, according to van de Panne, it is impossible for a turning body to follow an arbitrary path (§5.6, line 2). Thus, van de Panne teaches away from a combination

that involves a random motion path, such as in Grinstein. Applicant requests that Examiner provide motivation for combining Grinstein and van de Panne.

Therefore, claim 116 is patentable over the hypothetical combination of Grinstein and van de Panne.

Independent claims 121-123, 128, and 133 recite similar language and are also patentable over the hypothetical combination of Grinstein and van de Panne for at least the same reasons.

The claims not specifically mentioned above depend from their respective base claims, which were shown to be patentable over the hypothetical combination of Grinstein and van de Panne. In addition, these claims recite other features not included in their respective base claims. Thus, these claims are patentable for at least the reasons discussed above, as well as for the elements that they individually recite.

Examiner is invited to contact the undersigned in order to advance the prosecution of this case.

Respectfully submitted,
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